

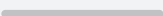
Transcript for CDC Media Telebriefing: COVID-19 Wastewater Surveillance

Press Briefing Transcript

Friday, February 4, 2022

- [Audio recording](#)  [MP3 – 4 MB]

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Operator:

Thank you for standing by. At this time, all participants are in a listening mode until the question and answer session of today's conference. At that time, you may press star one on your phone to ask a question. I would like to inform all parties that today's conference is being recorded. If you have any objections, you may disconnect at this time. I will now turn today's call over to Benjamin Haynes. Thank you. You may begin.

Benjamin Haynes:

Thank you Denise. Good morning and thank you all for joining us for today's briefing on wastewater surveillance. We are joined by Dr. Amy Kirby, team lead for the National Wastewater Surveillance System. Following Dr. Kirby's opening remarks, we will open it up for your questions. I'd now like to turn the call over to Dr. Kirby.

Dr. Amy Kirby:

Thank you, Ben. I'm here today to discuss the latest public health tool that's providing critical information on COVID-19 trends, as well as giving us a glimpse into a new frontier of infectious disease surveillance in the U.S. Estimates suggests between 40 and 80% of people with COVID-19 shed viral RNA in their feces, making wastewater and sewage an important opportunity for monitoring the spread of infection. Seeing the value of collecting this type of data during the COVID-19 pandemic, CDC initiated the National Wastewater Surveillance System. Or NEWS for short, in September of 2020. What started as a grassroots effort by academic researchers and wastewater utilities has quickly become a nationwide surveillance system with more than 34,000 samples collected representing approximately 53 million Americans. Currently, CDC is supporting 37 states, four cities and two territories to help develop wastewater surveillance systems in their communities. More than 400 testing sites around the country have already begun their wastewater surveillance efforts.

Dr. Amy Kirby:

But the real power of this program will be more evident in the coming weeks when hundreds more testing sites will begin submitting data. The information generated by wastewater surveillance offers public health officials with better understanding COVID-19 trends in communities. Because increases in wastewater generally occur before corresponding increases in clinical cases, wastewater surveillance serves as an early warning system for the emergence of COVID-19 in a community. These data are uniquely powerful because they capture the presence of infections from people with and without symptoms. And they're not affected by access to healthcare or availability of clinical testing. These built-in advantages can inform important public health decisions, such as where to allocate mobile testing and vaccination sites. Public health agencies have also used wastewater data to forecast changes in hospital utilization. providing additional

time to mobilize resources and preparation for increasing cases. Now, wastewater data are available for the first time on CDC's COVID Data Tracker. Visitors to the site will be able to see changes in virus levels in wastewater over the previous 15 days for each participating community, as well as the percentage of tests from the past 15 days that are positive.

Dr. Amy Kirby:

Updated daily, the wastewater sampling locations, which are also called sewer sheds, are color coded based on the rate that SARS CO-V 2 levels are increasing or decreasing. You can also see information on the county served and the size of the population for each sewer shed. While data from wastewater surveillance can reveal new insights about COVID-19 prevalence, at both the community and national levels, there are some things that can't tell us. Interpretation of data is limited in communities with minimal or no sewer infrastructure and in communities with transient populations, such as areas with high tourism. Additionally, wastewater surveillance cannot be used to determine whether a community is free from infections. For these reasons, wastewater surveillance is best used in combination with case based surveillance to maximize its value. We've already seen examples of cities and counties using their wastewater testing to better understand the trajectory of a surge of infections. Now more communities will have the opportunity to use this tool to help guide their public health decision making.

Benjamin Haynes:

Thank you, Dr. Kirby. Denise, we are now ready for questions.

Operator:

Thank you. The first question is from Erin Billups with Spectrum News Network. Your line is open.

Erin Billups:

Hi. Just wondering, one, what, if anything, can be done to maybe get more communities on board with this and plugged into this system and also what role this early warning system will help play moving forward. Is this one way that the country can move sort of out of a pandemic stage into a new normal by using the wastewater treatment samples that are collected?

Dr. Amy Kirby:

Sure. So let me touch on the first question. First about getting more communities onboard. So, we have developed a suite of resources to help our health departments build this capacity. And we have additional states building their systems now, and we expect the expect those to be available through COVID data tracker in the next few months. In addition, we have a commercial testing contract that will provide twice weekly testing to an additional 500 sites nationwide as those states build their systems. The second question about how this can be integrated into surveillance overall surveillance plans is a very good one and something that we are working closely with the rest of the COVID response here at CDC to find ways that wastewater surveillance can help provide situational awareness for what's going on in a community. As well as serving as that early warning system that a new increase may be coming in a community.

Benjamin Haynes:

Next question, please.

Operator:

Next question comes from Tom Howell with The Washington Times.

Tom Howell:

Hey, thanks for doing the call. Can you explain whether this wastewater surveillance has been done for previous pathogens or diseases and what did you learn from that experience? Thanks.

Dr. Amy Kirby:

Wastewater surveillance has been used for many decades actually to track polio in communities, not in the U.S., but definitely overseas as part of the polio eradication efforts. And they use it essentially the same way we do – so to look for communities for polio is circulating and then use that as a trigger for additional clinical surveillance in those communities.

Benjamin Haynes:

Next question, please.

Operator:

That is from Fran Fritz with Very Well Health. Your line is open.

Fran Kritz:

Thank you. I'm sorry. Can you explain what is new today? What is it new that you're announcing? There has been surveillance, so what is happening that you are announcing today?

Dr. Amy Kirby:

So the big news today is that the CDC data from the National Wastewater Surveillance System is available on COVID Data Tracker for the first time. And the advantage of this CDC supported dashboard is that it allows you to compare data across states directly. The data that's available on different state level dashboards doesn't have the same analyses behind it and so it's not directly comparable the way it is on the CDC dashboard.

Fran Kritz:

Thank you.

Benjamin Haynes:

Denise, I think we have one more question pending.

Operator:

Thank you. That is from Lena Sun. Your line is open.

Lena Sun:

Okay. Thank you for doing this, Dr. Kirby. Could you explain again, how many sites are currently feeding into the data that's on the dashboard now and how many more will you be having to come online in the future. You know, and that, that future is that in a weeks, or is that gonna be in a few months that you will be expanding the system? And when you get to that point, how much coverage will you have in the country? Will we have half the country, three-fourths, you know, something in every state? If you could just sort of put that in context, please. Thank you.

Dr. Amy Kirby:

We currently have over 400 sites that are providing data to CDC and that data will be shared on COVID data tracker. In the next few weeks, we expect to add at least an additional 250 sites to that total. And then over the next few months, as we see our additional state systems getting fully implemented, we expect additional sites coming on board from that as well.

Lena Sun:

So when you to the 250 extra sites, what kind of coverage will we have in the United States then? Will you have a look into every state?

Dr. Amy Kirby:

We will not have a look into every state, but we will have a look into most states, as well as territories and tribal communities. I will have to get back to you as an exact number. I don't have that available right now.

Benjamin Haynes:

Next question, please.

Operator:

That is from Denise Chow with NBC News.

Denise Chow:

Hi, thank you very much for doing this. You mentioned that this could function as kind of an early warning system. I was wondering if you could explain a little bit about what we know about when after infection people, or we might start to see viral particles show up in wastewater. Is it fairly shortly after? Do people still shed viral particles long after they're infectious? Just kind of that timeline. Thank you.

Dr. Amy Kirby:

Yeah, that's a great question. So what we see is shedding in feces starts very early after someone is infected. It's in fact, one of the first signs that we see of infection which is really important for this early warning capability for wastewater. We see those rates go up very, very high. So lots of virus shed into feces very early in the infection and then it tails off. People do continue shedding excuse me, shedding virus in their feces for up to a couple of weeks after infection, but at very low rates and that is not contributing significantly to the signal that we see in wastewater.

Benjamin Haynes:

Next question, please.

Operator:

Next question is from Alice Parks with TIME.

Alice Parks:

Thank you, Dr. Kirby. I was wondering if you could address a bit, the system has, you know, been up for a while. Can you talk a little bit about the data that supports it and you know, why it took to this point to add the data to a COVID data tracker? Was it a matter of being reassured about that signal and making sure that correlation, that association was scientifically valid?

Dr. Amy Kirby:

So we've seen from very early days in the pandemic that rates of detection in wastewater correlate very well with other their clinical indicators, like pace rates and hospitalization and test positivity. That data continues to come in and it continues to be a very solid indicator of what's going on in the community. We have been building the system with our states again since September of 2020 and our state partners have had this data available to use since then. We have been building the capacity to get this data into CDC and share it and we think that now is the point where there's enough data in our system that it is a good time to make it available to the public.

Benjamin Haynes:

Next question, please.

Operator:

Next question is Lisa Kreiger, with San Jose Mercury News your line is open.

Lisa Krieger:

Yes. Thank you. There was an interesting paper yesterday in Nature Communications about the detection of genetic lineages in some of the sewer sheds that were unfamiliar. You know, they hadn't been captured by sequencing of patients viruses. And, you know, there's a suggestion that maybe the lineages are coming from virus infected animals. Do you happen to know what percent of these wastewater samples are sequenced? And who's monitoring that from a federal perspective?

Dr. Amy Kirby:

So we do have many of our states are sequencing their wastewater samples and that data will be coming into CDC within the next few weeks. So, we will have that available to monitor, as well. That is a very powerful method for tracking variants of concern in wastewater and we're either to use that to be able to monitor, you know, again, seeing that early warning of new variants of concern entering our communities,

Lisa Krieger:

Just to follow up, have you seen anything, are you currently tracking that and have you seen anything that's I guess cryptic, is the phrase they use, that's interesting.

Dr. Amy Kirby:

We are not tracking cryptic lineages through NEWS but we are in contact with the researchers that publish that paper and are watching that work very closely.

Benjamin Haynes:

Next question, please.

Operator:

That is from Julie Steenhuysen with Reuters. Your line is open.

Julie Steenhuysen:

Thank you. Can you tell me is this going to be strictly for COVID or will this be part of future surveillance for other pathogens of pandemic significance?

Dr. Amy Kirby:

Yeah, so this system was stood up for COVID as part of the COVID response, but wastewater surveillance can be applicable to a wide variety of health concerns. And so we are right now working to expand the National Wastewater Surveillance platform to use this to gather data on other pathogens and we expect that work to commence by the end of this year. And our targets include antibiotic resistance, foodborne infections, like E. Coli, salmonella, norovirus influenza and the emerging fungal pathogen, Candida Auris.

Julie Steenhuysen:

Thank you.

Benjamin Haynes:

Next question, please.

Operator:

That comes from Dennis Thompson with Health Day. Your line is open.

Dennis Thompson:

Is there some place online where we can see a comprehensive list of the cities and sites that are doing this tracking for you right now? You know, will that list be updated so that we can see who's added in the future?

Dr. Amy Kirby:

Yeah, the best way to see that is through the data download feature on COVID data tracker. And so that will give you a line list of all of the sites and communities that are providing data.

Benjamin Haynes:

Next question, please.

Operator:

That comes from Dana McIntyre with the Augusta Press. Your line is open.

Dana McIntyre:

Thank you. How are the samples tested? What's the mechanism, what's the process for the testing and have communities, or will communities need to get additional equipment or additional testing supplies in order to participate?

Dr. Amy Kirby:

The wastewater sample is collected by utility operators at the site. The best way to do that is through a piece of equipment called an auto sampler. Many utilities already have that. We're working with the Water Environment Federation to provide that piece of equipment to utilities that don't but they can also just take what's called a grab sample. So, basically dipping a bottle into the wastewater flow to get a sample in time. That sample has been shipped to a laboratory. The laboratory will use methods to concentrate the viruses out of that wastewater sample. And then it looks very similar to clinical testing. They extract the genetic material from the viruses and use a quantitative polymerase chain reaction assay to measure how much of that RNA is present in the sample. All of that data, along with a suite of quality controlled variables, is submitted to CDC. We then do the analysis and report the final results back to our state partners through our internal data system and make that available on COVID data tracker.

Dana McIntyre:

Thank you.

Benjamin Haynes:

Next question please.

Operator:

Next question is from Dan Vergano with BuzzFeed News. Your line is open.

Dan Vergano:

Hi, thanks very much. Dan Vergano, BuzzFeed News. I'm wondering how easy or hard would it be to use this system for a new emerging infectious disease? Like could CDC tell members of this network to like, "Hey, look out for this new virus" if something else props up for future pandemic awareness? And sort of related, could this be used at all in the overdose crisis where there's, you know, been studies that have looked at fentanyl and heroin and so forth opioids in the sewage stream. Thanks very much.

Dr. Amy Kirby:

One of the strengths of wastewater surveillance is that it is very flexible. So once we have built this infrastructure to collect the samples, get them to a laboratory, get the data to CDC. We can add tests for new pathogens fairly quickly. So you are correct that should there be a new pathogen of interest, we could ramp up this system within a few weeks to start gathering community level data on that new pathogen. There is also interest in using this for non-infectious diseases as you allude to like substances of abuse. That approach needs more technical analysis and technical development. So we don't see that being an immediate use, but it is something we are considering down the road for our system.

Benjamin Haynes:

Next question, please,

Operator:

That comes from Kyle Jones with NBC Connecticut. Your line is open.

Kyle Jones:

Hi. I'm just wondering, how does this play into the future of the pandemic? There are some communities, as you've mentioned, there's one here in Connecticut that has been doing wastewater monitoring for the last year and a half or so. So is this sort of set up more as a national way to just monitor COVID and give I guess, give the warning when there might be some spikes, but it seems like COVID will be here for, for quite some time. So is this just sort of an early warning system just to keep things monitored? And then the second question is for those communities that do have them already set up, it sounds like they're going to be folded into this. So is there going to be financial support to kind of bring them on board and maybe bolster what already exists in those communities?

Dr. Amy Kirby:

Yes. So the role of wastewater surveillance will largely be around that early warning system to detect increased cases as soon as we can so that we can have those extra days for communities to prepare their hospital systems for the pending cases. However, it's also really useful for situational awareness. So as cases are increasing to see when we've passed the peak of a surge wastewater data can also be very useful for that and we saw that happen with the Omicron surge just these past few weeks. It's also very important as our testing strategies change. So as more people use at home tests instead of reported clinical tests wastewater surveillance will continue to be a robust surveillance approach for understanding what's going on in the communities. As far as funding for our states we fund wastewater surveillance on an annual basis and the system has enough funding to continue funding our states and expansion through 2025. And we are hope that we will be able to expand our funded states in this year's funding round.

Benjamin Haynes:

Next question, please.

Operator:

Next question is from Hadas Kuznits with KYW News Radio.

Hadas Kuznits:

Hi, Hadas Kuznits. Thank you for taking my call, my question, what some specific real life uses for wastewater surveillance and what are some of the like new uses communities can make with this data to make decisions about the COVID pandemic. Also, can you speak to data collected from targeted areas, in particular Philadelphia in the suburbs?

Dr. Amy Kirby:

Sure. So our public health partners are finding new ways to use wastewater data all the time. The thing we hear most commonly from our public health partners is that they use wastewater data because it gives them confidence that they understand what's going on in their communities. They're looking at a lot of data coming in and wastewater provides a really strong signal of again, increases and decreases in their communities. They have used that information to make decisions about resources – where are they going to send mobile testing sites, where do they need to send additional

hospital supplies. We have also seen them use this information to look for variants of concern in their communities and we have an MMWR out on that that was published January 21st. So lots of uses available there. I'm sorry, I don't have information available at my fingertips about the Philadelphia area but we can follow up with you about that.

Benjamin Haynes:

Next question, please.

Operator:

Next question is from Maryn McKenna with WIRED, your line is open.

Maryn McKenna:

Thanks for doing this briefing. Dr. Kirby, at the start of your remarks, you mentioned that this effort began with academic researchers and I'm wondering if you can say anything about how you've brought those sources of data at universities into this national system.

Dr. Amy Kirby:

Yeah, I'm really glad you asked that question because our academic partners and utility partners were really critical for the foundation of what has become the National Wastewater Surveillance System. We had many academic researchers that started doing wastewater surveillance in their communities. They partnered with utilities and health departments to generate this data even before there was really anywhere for it to go in public health system. We have also seen academic partners do wastewater surveillance to support their universities during their academic years to keep their campuses safe. Those partners many of them, are continuing to work with their public health agencies and they are part of the NEWS network and that data is coming to us. And we are looking forward to continuing to work with them. I will note, however that academic researchers are not built to do long term surveillance, they are built to do research and that's what we need them to do to continue developing this field. So one of our goals for the next couple of years is to transition the routine testing into public health and environmental health labs so that we can free up those academic researchers to continue moving the field forward.

Benjamin Haynes:

Denise, we have time for two more questions.

Operator:

Thank you. The next is from Liz Bonis with St. Claire Broadcast Company. Your line is open.

Liz Bonis:

Thank you very much. It's Liz from WKRC-TV in Cincinnati, the CBS affiliate here. And I'm curious if someone has this information in our community and our public health providers say, "Hey, for example, you're getting the next strain of COVID 19 in your wastewater." What would you recommend people do? I mean, I know you wanna listen to your public health providers, but is there some action that we can take?

Dr. Amy Kirby:

Yeah, so it would be the same as if you see cases rising. You're just going to do it earlier, right? So if you see that a new strain is coming into your community or that the rates and wastewater are starting to go up, you want to take all the same actions – masking, distancing getting vaccinated if you're not testing if you're feeling sick. But with wastewater, you can start doing those a few days earlier and those extra days really make a difference on the ultimate trajectory of that surge in your community.

Liz Bonis:

Thank you.

Benjamin Haynes:

And our last question, please.

Operator:

That is from Eugene Daniel with 13 News Now. Your line is open.

Eugene Daniel:

Hey, thank you very much for this briefing. Quick question, I'm in Virginia and I'm looking at the tracker and there are a bunch of sites that are listed in the Commonwealth, but they don't have data available. My question is, are we waiting for information to come from Virginia or do we expect that to be coming from the state?

Dr. Amy Kirby:

So we do expect that data to be coming from the state on data tracker. We are only showing data that's within the last 15 days because we want it to be again, comparable between sites so that everybody is looking at the most recent data. And so if we don't have any data for a site within the past 15 days we gray out that spot. So you know that the community is participating but we don't have any recent data and that's the case there. We do expect that data to be updated soon on data tracker.

Benjamin Haynes:

Thank you, Dr. Kirby. Thank you all for joining us today. If you have further questions, please contact the main media office at 404-639-3286. Or you can email media@cdc.gov. This will conclude today's briefing. Thank you.

Operator:

Thank you for participating with today's conference and you may disconnect.

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